

REMARKS

This application has been carefully reviewed in light of the Office Action dated March 12, 2002 (Paper No. 20). Claims 1 to 6, 11 to 25, 30 to 39, 42, 47 to 62, 65, 68 to 76 and 79 to 95 are in the application. Of those claims, Claims 1, 20, 31, 54, 84, 85 and 86 are independent. Reconsideration and further examination are respectfully requested.

Pursuant to the restriction requirement entered April 30, 2000 (as modified in the Office Action dated September 11, 2000), the following claims have been withdrawn from further consideration on the merits: Claims 1 to 6, 11 to 17, 31 to 39, 54 to 62, 79, 82 and 83. The restriction requirement was seasonably traversed, and pendency of those withdrawn claims has therefore been maintained. The following claims are being examined on the merits: Claims 18 to 25, 30, 42, 49 to 53, 65, 68 to 76, 80, 81 and 84 to 86. Of newly-added Claims 87 to 95, Claims 87, 90 and 92 are directed to a non-elected invention, and Claims 88, 89, 91 and 93 to 95 are directed to the elected invention.

The Office Action commented on the restriction requirement, and in addition entered objections to Claims 18, 42 and 65 under 37 C.F.R. § 1.75(c). The rejection is respectfully traversed, since Claims 18, 42 and 65 are already written in proper dependent form and otherwise comply fully with all statutory requirements for the content of dependent claims. Moreover, Applicants respectfully decline to write these claims in independent format, at least until an actionable Petition from the restriction requirement has been denied.

Two points are pertinent to this. First, Applicants have seasonably traversed the restriction requirement, arguing that (a) all claims feature a fibrous material subjected to a

specifically-recited treatment, such that examination of all claims together would entail only normal (and not undue) burdens of examination and prosecution, and (b) the elected claims to the product link both the process of making and the process of using such that MPEP § 809.03 applies and Applicants are entitled to examination of both the product and process of making claims, until such time that the product claims are found allowable at which time the process of using must also be joined. See MPEP § 806.05(i).

Second, a Petition from the restriction requirement is timely even if filed after a final rejection, and a final rejection has not yet been entered. Accordingly, since the time for a Petition has not yet arrived, Applicants believe they are entitled to maintain the current format for Claims 18, 42 and 65.

The continued objection to the format of third-party trademarks is noted. Applicants have previously traversed this objection, and have explained that the proprietary nature of marks has been respected, and no actions have been taken to affect their validity, since in all instances the trademarks are accompanied by generic terminology as well as proper identification of the trademark together with attribution to the trademark holder. The Office Action's sole objection appears to be failure to capitalize the trademarks. However, the Office Action has not explained how such a failure somehow treats the marks with disrespect, or somehow affects the validity of the marks, particularly in view of the careful actions already taken by the Applicants herein. Accordingly, it is respectfully submitted that the Office action has not met its burden of "answer[ing] the substance of" Applicants' traversal. See MPEP § 707.07(f). The traversal is maintained.

Claims 19 and 30 were rejected under 35 U.S.C. § 112, second paragraph. In response, each of these claims has been amended to change “fibrous materials” to “fibrous material”. Withdrawal of the rejection is respectfully requested.

Claims 18 to 21, 30, 42, 65, 71, 82 and 76 were rejected under 35 U.S.C. § 102(b) over European 771,662 (Yamamoto ‘662); Claims 18 to 25, 30, 42, 47 to 53, 65, 68 to 76, 80, 81 and 84 to 86 were rejected under § 103(a) over U.S. Patent 5,784,088 (Ujita ‘088) in view of U.S. Patent 5,509,140 (Koitabashi ‘140); Claims 22 to 25, 47 to 53, 68 to 70, 73 to 75 and 84 to 86 were rejected under § 103(a) over Yamamoto ‘662 in view of Koitabashi ‘140; and Claims 18 to 25, 30, 42, 47 to 53, 65, 68 to 76, 80, 81 and 84 to 86 were rejected for obviousness-type double patenting over issued claims 1 to 22 of U.S. Patent 6,234,618 (Yamamoto ‘618).

Reconsideration and withdrawal are respectfully requested, for at least the following reasons.

The invention concerns a fibrous material produced by steps which include, *inter alia*, processing with a glycol treatment (Claims 18, 20, 84, 85 and 86) or treatment with a treating agent (Claim 42). The glycol treatment involves contact with an ethylene oxide adduct of a glycol having a cloud point of at least 65 °C, and the treating agent likewise contains a ethylene oxide adduct of a glycol having a cloud point of at least 65 °C.

By processing with a glycol treatment, or treating with a treating agent, advantageous effects are obtained that are not found in the prior art. For example, and as explained in the specification, in the case of fibrous materials formed from raw thermoplastic resin, additives are often contained in the resin. These additives tend to leach from the fibrous materials in the course of ordinary use, causing deleterious effects, particularly in instances where the fibrous material is used in connection with an ink absorbing member. By virtue of the

glycol treatment, or the treating agent, releasable components tend to become emulsified or water-soluble, as described at page 34 of the specification. Because the releasable components become emulsified or water-soluble, the deleterious effects that their leaching might otherwise cause are largely avoided.

These advantageous effects are clearly seen in the examples described in the specification, and comparative examples, all with respect to use of such fibrous materials as an ink absorber. Examples 1 and 2 of the specification clearly show alleviation of the influence of spinning oils that otherwise adhere to the surface of fibrous material and which can adversely affect ink jet printing. Comparative example 1, on the other hand, which was produced without the glycol treatment of examples 1 and 2, shows the deleterious effects of additives.

Likewise, with respect to example 8 and the result thereof in Table 4, it is clear that components of surfactants adhering onto the surface of fibrous materials are solubilized or emulsified by subjecting the fibrous materials to a treating agent using an ethylene oxide adduct of a glycol having a cloud point of at least 65°C.

It is Applicants' position that the applied art, whether taken alone or in any permissible combination, fails to disclose or reasonably to suggest processing with a glycol treatment (or treatment with a treating agent), as claimed in each of the claims herein, much less the attendant benefits of such processing or treatment.

Yamamoto '662, for example, teaches that a surfactant is applied to a fibrous material for use in an ink tank, and that the surfactant is preferably non-ionic. Treatment by a surfactant, however, is different from a glycol treatment or treatment with a treating agent. Moreover, the surfactant disclosed by Yamamoto '662 is unlike the glycol treatment or treating

agent herein, which contains an ethylene oxide adduct of a glycol having a cloud point of at least 65°C.

In previous responses, it was pointed out that Yamamoto '662 does not discuss the technical problem addressed by the invention herein, nor the technical concept for addressing the problem. Claim language, in the form of a "whereby" clause, has been added so as to accentuate this additional difference, and Applicants respectfully assert again that Yamamoto '662 is unrelated to emulsification or water-dissolution of releasable components through a glycol treatment or a treating agent.

It is therefore respectfully submitted that Yamamoto '662 does not anticipate Claims 18 to 21, 30, 42, 65, 71, 72 and 76, and withdrawal of the § 102(b) rejection is respectfully requested.

With respect to the rejections under § 103(a), Ujita '088 does not disclose anything concerning an ethylene oxide adduct of a glycol having a cloud point of at least 65°C, as apparently conceded in the rejection. In addition, in connection with one of its ink absorbing members, Ujita '088 discusses a treatment for a hydrophilic property. The Office Action takes the position that those skilled in the art could easily employ such a feature in the arrangement of Ujita '088, in view of the teachings of Koitabashi '140. Applicants respectfully disagree. It is true that Koitabashi discuses use of an acetylene glycol ethylene oxide adduct, but Koitabashi uses this substance in its ink, and not applied to its fibrous materials. It is therefore inconceivable that one of ordinary skill in the art would transfer the teachings of Koitabashi '140, which involves treatment of ink, to that of Ujita '088, which involves treatment of an ink absorbing member.

It is thought that the Office Action might be taking the extreme position that charging the ink tank of Ujita '088 with the glycol-added ink of Koitabashi '140, somehow corresponds to the claimed invention. Applicants respectfully assert that such a position, if indeed that is the case, would be unfounded. In particular, the claims herein specify a "glycol treatment" or a "treating agent". As shown in the specification herein, a suitable solution for such treatment typically involves 70% glycol by weight (see new dependent Claims 87 to 95). In contrast, the ink of Koitabashi '140 involves at most 2.5% acetylene glycol-ethylene oxide adducts with up to 15% diethylene glycol. Under no stretch of the imagination could such an ink-based solution be considered as corresponding to the claimed "glycol treatment" or "treating agent".

It is therefore respectfully submitted that the § 103(a) rejection should be withdrawn.

With respect to the rejection for obviousness-type double patenting over Yamamoto '618<sup>1/</sup>, there is absolutely nothing whatsoever in any of Claims 1 to 22 of Yamamoto '618 which in any way relates to an ethylene oxide of a glycol having a cloud point of at least 65°C. It is noted that Yamamoto '618 is the U.S. counterpart to Yamamoto '662, and as noted above, Yamamoto '662 nowhere mentions such a substance, much less a glycol treatment or a treating agent containing such a substance.

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<sup>1/</sup>The Office Action took the position that no response had been made to this double patenting rejection, which is not correct. In fact, the double patenting rejection was responded to beginning at the paragraph bridging pages 19 and 20 in the Amendment dated November 6, 2001, which very clearly refers to "Yamamoto '618".

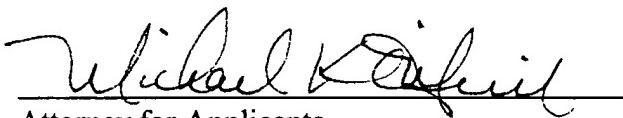
It is therefore respectfully requested to withdraw the obviousness-type double patenting rejection.

Regarding a formal matter involving an Information Disclosure Statement, it is respectfully requested for the Examiner to consider the art cited in the Information Disclosure Statement dated April 23, 2002, and to make that art formally of record.

No other matters being raised in the Office Action, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

  
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Attorney for Applicants

Registration No. 32622

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended Three Times) A process for producing a fibrous material comprising:
- providing a spun yarn by melt spinning a thermoplastic resin; and
- subjecting the spun yarn to a glycol treatment in which the spun yarn is contacted with an ethylene oxide adduct of a glycol having a cloud point of at least 65°C, whereby at least some releasable components of the spun yarn are emulsified or made water-soluble by the glycol treatment.

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19. (Amended Three Times) An ink-absorbing member constructed to deliverably hold an ink-jet ink therein, comprising the fibrous material[s] according to Claim 18.

20. (Amended Three Times) A fibrous material composed of a thermoplastic resin, which is treated by a glycol treatment in [to] which [is added] an ethylene oxide adduct of a glycol having a cloud point of at least 65°C is added, whereby at least some releasable components of the thermoplastic resin are emulsified or made water-soluble by the glycol treatment.

30. (Amended Four Times) An ink-absorbing member constructed to deliverably hold an ink-jet ink therein, comprising the fibrous material[s] according to Claim 20.

31. (Amended Three Times) A process for treating an ink-absorbing member which can deliverably hold an ink-jet ink therein, the process comprising the steps of:

treating a molding comprising a fibrous material composed of a thermoplastic resin with a treating agent containing an ethylene oxide adduct of a glycol having a cloud point of at least 65°C, whereby at least some releasable components of the thermoplastic resin are emulsified or made water-soluble by the treating agent.

54. (Amended Three Times) A treating process for regenerating ink absorbing properties of an ink-absorbing member composed principally of a fibrous material, the process comprising the step of:

treating the ink-absorbing member with a residual ink held therein with a treating agent containing an ethylene oxide adduct of a glycol having a cloud point of at least 65°C, whereby at least some releasable components of the fibrous material are emulsified or made water-soluble by the treating agent.

84. (Amended) A fibrous material obtained by a process comprising the steps of:

melt-spinning a thermoplastic resin comprising additives with spinning oil and forming a yarn; and

replacing the additives and spinning oil contained in or attached to the spun yarn by treating the spun yarn with a glycol treatment containing an [with] ethylene oxide adduct of glycol having a cloud point of at least 65°C.

85. (Amended) A fibrous material for an ink-absorbing member holding an ink-jet ink, obtained by a process comprising the steps of:

melt-spinning a thermoplastic resin comprising additives with spinning oil and forming a yarn, the additives and spinning oil giving effect to ink-jet properties of the ink-jet ink; and

treating the spun yarn with a glycol treatment containing an ethylene oxide adduct of glycol having a cloud point of at least 65°C, the treating step being performed so that the ink-jet ink is free from any effect of the additives and spinning oil.

86. (Amended) A fibrous material for an ink-absorbing member holding an ink-jet ink, obtained by a process comprising the steps of:

melt-spinning a thermoplastic rein comprising additives with spinning oil and forming a yarn; and

replacing the additives and spinning oil contained in or attached to the spun yarn by treating the spun yarn with a glycol treatment containing an [with] ethylene oxide adduct of glycol having a cloud point of at least 65°C, and emulsifying the additives and spinning oil with the ethylene oxide adduct of glycol, so that the ink-jet ink is free from any effects of the additives and spinning oil.